

REMARKS

Reconsideration is respectfully requested.

I. Status of the Claims

Claims 2, 3, 7, and 8 have been cancelled without prejudice or disclaimer of the subject matter therein.

Claims 1, 4-6, and 9-13 have been amended, no new matter is added.

With respect to “a total amount of hemoglobin” and “a difference in amount between oxygenated hemoglobin and reduced hemoglobin, which exist on said biological surface,” these amendments are made based on the Specification, paragraph [0039].

With respect to “an amount of melanin, an amount of talaporfin” this amendment is made based on the Specification, paragraphs [0051] and [0064] and Fig.16.

Regarding claims 12, 13, the recitation of a “superficial chemical species” is amended to a “biological surface.” The amendments are made based on the Specification, paragraph [0008].

In the claims, the recitation "a superficial chemical species" is deleted and the recitation of "the measuring method" in claims 1-11 and "The apparatus for measurement" in claims 12-13 are used in place of the original corresponding recitations.

Claim 12 has been amended to remove any reference to subject matter interpreted under 35 U.S.C. § 112, sixth paragraph.

Claims 1, 4-6, and 9-13 are pending.

Claim 11 has been objected to for informalities, and the spelling error “1to” is corrected to “to”. Applicants request the object be withdrawn.

II. Status of the Specification

A clean and marked-up copy of the specification is enclosed. The Specification incorporates the changes made in the Preliminary Amendment dated August 23, 2006 and under PCT Article 34, as entered and accepted. The Specification has been amended to recite the proper headings. The Abstract has been amended to be in proper form.

Further to the objection, the Amendments made to the Specification on August 8, 2006, by way of an Amendment under PCT Article 34 have now been cancelled. No new matter is added. Applicants respectfully request that the objection be withdrawn.

III. Status of the Drawings

The drawings have be objected to for not petitioning for the submission of the color drawings. Applicants submit that they are not requesting for the submission of color drawings and/or photographs. The previous submission can be treated as a standard drawing submission and the Applicants accepts standard reproductions thereof. Applicants respectfully request that the drawings submitted August 23, 2006 be accepted.

IV. Rejections under 35 U.S.C. § 112

Claims 1-13 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Claims 2, 3, 7, and 8 have been cancelled, rendering the rejection moot. Applicants traverse.

Claims 1, 4-6, 11, and 12 have been amended to comply with the written description requirement. Claims 4-6, and 11 have been amended to recite the proper ranges. Applicants submit that the claims now satisfy the requirements of First Paragraph, and respectfully request that the rejections be withdrawn.

Claims 1-13 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Claims 2, 3, 7, and 8 have been cancelled, rendering the rejection moot. Applicants traverse.

The preamble of the claims have been amended. Claim 12 has been amended so the subject matter has proper antecedent basis. Claims 12 and 13 have been amended to remove any language corresponding to § 112, sixth paragraph. Applicants submit that the claims are definite and respectfully request that the rejections be withdrawn.

V. Rejections under 35 U.S.C. § 103

Claims 1-6 and 10-13 are rejected under 35 U.S.C. § 103(a) as obvious over WO 03/043492 ("Lilge") in view of U.S. Patent No. 6,587,702 to Ruchti et al. ("Ruchti"). Claim 7 is

rejected under 35 U.S.C. § 103(a) as unpatentable over Lilge in view of Ruchti, and further in view of U.S. Patent Publication 2003/0032064 to Soller et al. (“Soller”). Claims 8 and 9 are rejected under 35 U.S.C. § 103(a) as unpatentable over Lilge in view of Ruchti, and further in view of U.S. Patent Publication 2004/0243198 to Heacock et al. (“Heacock”). Claims 2, 3, 7, and 8 have been cancelled, rendering the rejection moot. Applicants traverse.

Claim 1 recites the step of:

projecting the data of each position onto a direction of the eigenvector of said at least three principal components to measure at least one of a total amount of hemoglobin, an amount of melanin, an amount of talaporfin, and a difference in amount between oxygenated hemoglobin and reduced hemoglobin, which exist on said biological surface, based on a magnitude of the component of said data with respect to the direction of said eigenvector.

The Examiner contends that Lilge discloses everything but the above element, and that this is disclosed by Ruchti. However, Ruchti is using his eigenvectors to “estimate the thickness of the subcutaneous tissue and overall level of fatness of the individual.” Ruchti, column 5, lines 14-19. There is no teaching or suggestion that Ruchti’s methods can measure “a total amount of hemoglobin, an amount of melanin, an amount of talaporfin, and a difference in amount between oxygenated hemoglobin and reduced hemoglobin,” as claimed. Further, all of the other references are silent in this regard.

Turning to claim 12, it recites the element of:

a display displaying a magnitude of the component of said data on a gray scale or in colors according to the magnitude, on a two-dimensional screen by projecting the data of each position onto a direction of the eigenvector of said at least three principal components to measure at least one of a total amount of hemoglobin, an amount of melanin, an amount of talaporfin, and a difference in amount between oxygenated hemoglobin and reduced hemoglobin, which exist on said biological surface, based on the magnitude of the component of said data with respect to the direction of said eigenvector.

As argued above, none of the references disclose measuring “a total amount of hemoglobin, an amount of melanin, an amount of talaporfin, and a difference in amount between oxygenated hemoglobin and reduced hemoglobin,” using eigenvectors. Thus, none of the references disclose a display showing the same.

Applicants submit that none of Lilge, Ruchti, Stoller, or Heacock, in any combination, teach or suggest every element of the claimed invention. Further, claims 4-6, 9-11, and 13

depend on claims 1 or 12, and are allowable based at least on the arguments above. Applicants respectfully request that the rejections be withdrawn.

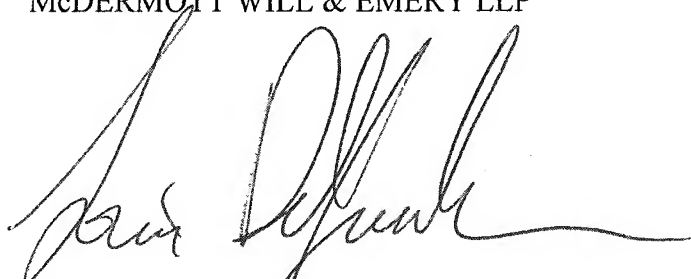
CONCLUSION

It is believed that the application and all pending claims are in condition for allowance.

If there are any remaining issues which the Examiner believes can be resolved by a Supplemental or an Examiner's Amendment, the Examiner is respectfully requested to contact the undersigned.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 associated with Customer No. 20277 and please credit any excess fees to such deposit account.

Respectfully submitted,
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**Please recognize our Customer No. 20277
as our correspondence address.**

Attachments: Marked-up Substitute Specification, and Clean Substitute Specification, as stated